RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/728,420B_

Source: _1FWO_

Date Processed by STIC: _11/1/04_

ENTERED

IFWO

RAW SEQUENCE LISTING   DATE: 11/01/2004
PATENT APPLICATION: US/10/728,420B   TIME: 12:15:41

Input Set : D:\Sequence Listing 015181-1 US rev 09-14-04.txt
Output Set: N:\CRF4\11012004\J728420B.raw

```
 4 <110> APPLICANT: WOULFE, SUSAN L.
 5        JAIN, RITA
 6        BURR, AIMEE
 8 <120> TITLE OF INVENTION: ENGINEERED FAB' FRAGMENT ANTI-TUMOR
 9        NECROSIS FACTOR ALPHA IN COMBINATION WITH DISEASE MODIFYING
10        ANTI-RHEUMATIC DRUGS
12 <130> FILE REFERENCE: 122294-1010
14 <140> CURRENT APPLICATION NUMBER: US/10/728,420B
16 <141> CURRENT FILING DATE: 2003-12-05
18 <150> PRIOR APPLICATION NUMBER: US 60/431,053
20 <151> PRIOR FILING DATE: 2002-12-05
22 <160> NUMBER OF SEQ ID NOS: 117
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 5
28 <212> TYPE: PRT
29 <213> ORGANISM: Artificial Sequence
31 <220> FEATURE:
32 <223> OTHER INFORMATION: Mouse mononclonal antibody hTNF40 CDRH1
34 <400> SEQUENCE: 1
35 Asp Tyr Gly Met Asn
36  1               5
39 <210> SEQ ID NO: 2
40 <211> LENGTH: 17
41 <212> TYPE: PRT
42 <213> ORGANISM: Artificial Sequence
44 <220> FEATURE:
45 <223> OTHER INFORMATION: Mouse monoclonal antibody hTNF40/human hybrid CDRH2
47 <400> SEQUENCE: 2
48 Trp Ile Asn Thr Tyr Ile Gly Glu Pro Ile Tyr Ala Asp Ser Val Lys
49  1               5                   10                  15
50 Gly
53 <210> SEQ ID NO: 3
54 <211> LENGTH: 9
55 <212> TYPE: PRT
56 <213> ORGANISM: Artificial Sequence
58 <220> FEATURE:
59 <223> OTHER INFORMATION: Mouse monoclonal antibody hTNF40 CDRH3
61 <400> SEQUENCE: 3
62 Gly Tyr Arg Ser Tyr Ala Met Asp Tyr
63  1               5
66 <210> SEQ ID NO: 4
67 <211> LENGTH: 11
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Input Set : **D:\Sequence Listing 015181-1 US rev 09-14-04.txt**
Output Set: **N:\CRF4\11012004\J728420B.raw**

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 68 <212> TYPE: PRT
 69 <213> ORGANISM: Artificial Sequence
 71 <220> FEATURE:
 72 <223> OTHER INFORMATION: Mouse monoclonal antibody hTNF40 CDRL1
 74 <400> SEQUENCE: 4
 75 Lys Ala Ser Gln Asn Val Gly Thr Asn Val Ala
 76  1               5                   10
 79 <210> SEQ ID NO: 5
 80 <211> LENGTH: 7
 81 <212> TYPE: PRT
 82 <213> ORGANISM: Artificial Sequence
 84 <220> FEATURE:
 85 <223> OTHER INFORMATION: Mouse monoclonal antibody hTNF40 CDRL2
 87 <400> SEQUENCE: 5
 88 Ser Ala Ser Phe Leu Tyr Ser
 89  1               5
 92 <210> SEQ ID NO: 6
 93 <211> LENGTH: 9
 94 <212> TYPE: PRT
 95 <213> ORGANISM: Artificial Sequence
 97 <220> FEATURE:
 98 <223> OTHER INFORMATION: Mouse monoclonal antibody hTNF40 CDRL3
100 <400> SEQUENCE: 6
101 Gln Gln Tyr Asn Ile Tyr Pro Leu Thr
102  1               5
105 <210> SEQ ID NO: 7
106 <211> LENGTH: 17
107 <212> TYPE: PRT
109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Mouse monoclonal antibody hTNF40 CDRH2
114 <400> SEQUENCE: 7
115 Trp Ile Asn Thr Tyr Ile Gly Glu Pro Ile Tyr Val Asp Asp Phe Lys
116  1               5                   10                  15
117 Gly
120 <210> SEQ ID NO: 8
121 <211> LENGTH: 321
122 <212> TYPE: DNA
123 <213> ORGANISM: Artificial Sequence
125 <220> FEATURE:
126 <221> NAME/KEY: CDS
128 <222> LOCATION: (1)...(321)
129 <223> OTHER INFORMATION: Synthetic hTNF40-gL1
131 <400> SEQUENCE: 8
132 gac att caa atg acc cag agc cca tcc agc ctg agc gca tct gta gga     48
133 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
134  1               5                   10                  15
136 gac cgg gtc acc atc act tgt aaa gcc agt cag aac gta ggt act aac     96
137 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asn Val Gly Thr Asn
```

```
138                20                    25                   30
140 gta gcc tgg tat cag caa aaa cca ggt aaa gcc cca aaa gcc ctc atc     144
141 Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu Ile
142          35                    40                   45
144 tac agt gcc tct ttc ctc tat agt ggt gta cca tac agg ttc agc gga     192
145 Tyr Ser Ala Ser Phe Leu Tyr Ser Gly Val Pro Tyr Arg Phe Ser Gly
146          50                    55                   60
148 tcc ggt agt ggt act gat ttc acc ctc acg atc agt agc ctc cag cca     240
149 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
150 65                    70                   75                   80
152 gaa gat ttc gcc act tat tac tgt caa cag tat aac atc tac cca ctc     288
153 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ile Tyr Pro Leu
154                    85                    90                   95
156 aca ttc ggt cag ggt act aaa gta gaa atc aaa                         321
157 Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
158              100                   105
161 <210> SEQ ID NO: 9
163 <400> SEQUENCE: 9
164 000
167 <210> SEQ ID NO: 10
169 <400> SEQUENCE: 10
170 000
173 <210> SEQ ID NO: 11
174 <211> LENGTH: 354
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <221> NAME/KEY: CDS
180 <222> LOCATION: (1)...(354)
181 <223> OTHER INFORMATION: Grafted Heavy Chain for Modified Fab
183 <400> SEQUENCE: 11
184 gag gtt cag ctg gtc gag tca gga ggc ggt ctc gtg cag cct ggc gga     48
185 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
186 1                 5                    10                   15
188 tca ctg aga ttg tcc tgt gct gca tct ggt tac gtc ttc aca gac tat     96
189 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Val Phe Thr Asp Tyr
190              20                    25                   30
192 gga atg aat tgg gtt aga cag gcc ccg gga aag ggc ctg gaa tgg atg     144
193 Gly Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
194              35                    40                   45
196 ggt tgg att aat act tac att gga gag cct att tat gct gac agc gtc     192
197 Gly Trp Ile Asn Thr Tyr Ile Gly Glu Pro Ile Tyr Ala Asp Ser Val
198          50                    55                   60
200 aag ggc aga ttc acg ttc tct cta gac aca tcc aag tca aca gca tac     240
201 Lys Gly Arg Phe Thr Phe Ser Leu Asp Thr Ser Lys Ser Thr Ala Tyr
202 65                    70                   75                   80
204 ctc caa atg aat agc ctg aga gca gag gac acc gca gtg tac tat tgt     288
205 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
206              85                    90                   95
```

W--> appears beside line 164 000
W--> appears beside line 170 000

RAW SEQUENCE LISTING   DATE: 11/01/2004
PATENT APPLICATION: **US/10/728,420B**   TIME: 12:15:41

Input Set : **D:\Sequence Listing 015181-1 US rev 09-14-04.txt**
Output Set: **N:\CRF4\11012004\J728420B.raw**

```
208 gct aga gga tac aga tct tat gcc atg gac tac tgg ggc cag ggt acc   336
209 Ala Arg Gly Tyr Arg Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr
210          100              105              110
212 cta gtc aca gtc tcc tca                                            354
213 Leu Val Thr Val Ser Ser
214          115
217 <210> SEQ ID NO: 12
219 <400> SEQUENCE: 12
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W--> 220 000
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223 <210> SEQ ID NO: 13
225 <400> SEQUENCE: 13
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W--> 226 000
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229 <210> SEQ ID NO: 14
231 <400> SEQUENCE: 14
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W--> 232 000
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235 <210> SEQ ID NO: 15
237 <400> SEQUENCE: 15
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W--> 238 000
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241 <210> SEQ ID NO: 16
243 <400> SEQUENCE: 16
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W--> 244 000
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247 <210> SEQ ID NO: 17
249 <400> SEQUENCE: 17
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W--> 250 000
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253 <210> SEQ ID NO: 18
255 <400> SEQUENCE: 18
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W--> 256 000
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259 <210> SEQ ID NO: 19
261 <400> SEQUENCE: 19
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W--> 262 000
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265 <210> SEQ ID NO: 20
267 <400> SEQUENCE: 20
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W--> 268 000
```
271 <210> SEQ ID NO: 21
273 <400> SEQUENCE: 21
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W--> 274 000
```
277 <210> SEQ ID NO: 22
279 <400> SEQUENCE: 22
```
W--> 280 000
```
283 <210> SEQ ID NO: 23
285 <400> SEQUENCE: 23
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W--> 286 000
```
289 <210> SEQ ID NO: 24
291 <400> SEQUENCE: 24
```
W--> 292 000
```
295 <210> SEQ ID NO: 25
297 <400> SEQUENCE: 25
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W--> 298 000
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301 <210> SEQ ID NO: 26
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RAW SEQUENCE LISTING   DATE: 11/01/2004
PATENT APPLICATION: **US/10/728,420B**   TIME: 12:15:41

Input Set : **D:\Sequence Listing 015181-1 US rev 09-14-04.txt**
Output Set: **N:\CRF4\11012004\J728420B.raw**

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        303 <400> SEQUENCE: 26
W--> 304 000
        307 <210> SEQ ID NO: 27
        309 <400> SEQUENCE: 27
W--> 310 000
        313 <210> SEQ ID NO: 28
        315 <400> SEQUENCE: 28
W--> 316 000
        319 <210> SEQ ID NO: 29
        321 <400> SEQUENCE: 29
W--> 322 000
        325 <210> SEQ ID NO: 30
        327 <400> SEQUENCE: 30
W--> 328 000
        331 <210> SEQ ID NO: 31
        333 <400> SEQUENCE: 31
W--> 334 000
        337 <210> SEQ ID NO: 32
        339 <400> SEQUENCE: 32
W--> 340 000
        343 <210> SEQ ID NO: 33
        345 <400> SEQUENCE: 33
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        351 <400> SEQUENCE: 34
W--> 352 000
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        357 <400> SEQUENCE: 35
W--> 358 000
        361 <210> SEQ ID NO: 36
        363 <400> SEQUENCE: 36
W--> 364 000
        367 <210> SEQ ID NO: 37
        369 <400> SEQUENCE: 37
W--> 370 000
        373 <210> SEQ ID NO: 38
        375 <400> SEQUENCE: 38
W--> 376 000
        379 <210> SEQ ID NO: 39
        381 <400> SEQUENCE: 39
W--> 382 000
        385 <210> SEQ ID NO: 40
        387 <400> SEQUENCE: 40
W--> 388 000
        391 <210> SEQ ID NO: 41
        393 <400> SEQUENCE: 41
W--> 394 000
        397 <210> SEQ ID NO: 42
        399 <400> SEQUENCE: 42
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VERIFICATION SUMMARY　　　　　　　　DATE: 11/01/2004
PATENT APPLICATION:　**US/10/728,420B**　　TIME: 12:15:42

Input Set : **D:\Sequence Listing 015181-1 US rev 09-14-04.txt**
Output Set: **N:\CRF4\11012004\J728420B.raw**

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L:164 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (9)  SEQUENCE:
L:170 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (10) SEQUENCE:
L:220 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (12) SEQUENCE:
L:226 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (13) SEQUENCE:
L:232 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (14) SEQUENCE:
L:238 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (15) SEQUENCE:
L:244 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (16) SEQUENCE:
L:250 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (17) SEQUENCE:
L:256 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (18) SEQUENCE:
L:262 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (19) SEQUENCE:
L:268 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (20) SEQUENCE:
L:274 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (21) SEQUENCE:
L:280 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (22) SEQUENCE:
L:286 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (23) SEQUENCE:
L:292 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (24) SEQUENCE:
L:298 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (25) SEQUENCE:
L:304 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (26) SEQUENCE:
L:310 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (27) SEQUENCE:
L:316 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (28) SEQUENCE:
L:322 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (29) SEQUENCE:
L:328 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (30) SEQUENCE:
L:334 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (31) SEQUENCE:
L:340 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (32) SEQUENCE:
L:346 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (33) SEQUENCE:
L:352 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (34) SEQUENCE:
L:358 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (35) SEQUENCE:
L:364 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (36) SEQUENCE:
L:370 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (37) SEQUENCE:
L:376 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (38) SEQUENCE:
L:382 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (39) SEQUENCE:
L:388 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (40) SEQUENCE:
L:394 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (41) SEQUENCE:
L:400 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (42) SEQUENCE:
L:406 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (43) SEQUENCE:
L:412 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (44) SEQUENCE:
L:418 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (45) SEQUENCE:
L:424 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (46) SEQUENCE:
L:430 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (47) SEQUENCE:
L:436 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (48) SEQUENCE:
L:442 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (49) SEQUENCE:
L:448 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (50) SEQUENCE:
L:454 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (51) SEQUENCE:
L:460 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (52) SEQUENCE:
L:466 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (53) SEQUENCE:
L:472 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (54) SEQUENCE:
L:478 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (55) SEQUENCE:
L:484 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (56) SEQUENCE:
L:490 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (57) SEQUENCE:
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VERIFICATION SUMMARY DATE: 11/01/2004
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Input Set : **D:\Sequence Listing 015181-1 US rev 09-14-04.txt**
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```
L:496  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (58)  SEQUENCE:
L:502  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (59)  SEQUENCE:
L:508  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (60)  SEQUENCE:
L:514  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (61)  SEQUENCE:
L:520  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (62)  SEQUENCE:
L:526  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (63)  SEQUENCE:
L:532  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (64)  SEQUENCE:
L:538  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (65)  SEQUENCE:
L:544  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (66)  SEQUENCE:
L:550  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (67)  SEQUENCE:
L:556  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (68)  SEQUENCE:
L:562  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (69)  SEQUENCE:
L:568  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (70)  SEQUENCE:
L:574  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (71)  SEQUENCE:
L:580  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (72)  SEQUENCE:
L:586  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (73)  SEQUENCE:
L:592  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (74)  SEQUENCE:
L:598  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (75)  SEQUENCE:
L:604  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (76)  SEQUENCE:
L:610  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (77)  SEQUENCE:
L:616  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (78)  SEQUENCE:
L:622  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (79)  SEQUENCE:
L:628  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (80)  SEQUENCE:
L:634  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (81)  SEQUENCE:
L:640  M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (82)  SEQUENCE:
L:1127 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (110) SEQUENCE:
L:1133 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (111) SEQUENCE:
L:1139 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (112) SEQUENCE:
L:1184 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (114) SEQUENCE:
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